

<b>Author Year</b> <b>Country</b> <b>Score</b> <b>Research Design</b> <b>Total Sample Size</b>	<b>Methods</b>	<b>Outcome</b>
Samuelsson 2001 Sweden Pre-Post N=38	<p><b>Population:</b> Mean age: 43 yr; Gender: NA; Injury etiology: SCI=20, multiple sclerosis=7, stroke=4, cerebral palsy=4; spina bifida=3.</p> <p><b>Intervention:</b> Patients who received client-specific, wheelchair modifications due to a problem with wheelchair seating were assessed before the modification and at a mean follow-up time of 6.5 mo.</p> <p><b>Outcome Measures:</b> Effect of intervention on initial problem; Effect of intervention on other functionality aspects; Rhombo Medical Sensor Mess System (RMSMS); Visual Analogue Scale (VAS).</p>	<ol style="list-style-type: none"> <li>1. The most prevalent problems requiring modification were seating discomfort (87%), back pain (63%), spinal deformity (26%) and pressure sores (18%).</li> <li>2. The most important functionality aspect described by patients was comfort at work followed by comfort at rest.</li> <li>3. A significant decrease in pain intensity according to the VAS was observed from pre to post-intervention in patients initially reporting back pain (<math>p&lt;0.001</math>).</li> <li>4. All patients that initially reported pressure sores had a decreased maximum buttock pressure at follow-up according to the RMSMS.</li> <li>5. All issues reported were addressed positively or very positively in 79% of patients and 8% reported no difference or a negative effect of intervention.</li> <li>6. Seven patients did not accept the intervention at follow-up: 2 reported a negative effect of the intervention on other functionality aspects; and five reported no difference or a negative effect on their initial problem.</li> </ol>
Kennedy 2003 UK Case Series N=50	<p><b>Population:</b> Mean age: 41.1 yr; Gender: males=37, females=13; Level of Injury: complete paraplegia=13, complete tetraplegia=21, incomplete injury=16.</p> <p><b>Intervention:</b> A retrospective review was conducted on patients that either received a specialized seating assessment (SSA) prior to their first Needs Assessment Checklist (NAC) (Group 1, N=30), received a SSA in between their first and second NAC (Group 2, N=11), or did not receive a SSA (Group 3, N=9).</p> <p><b>Outcome Measures:</b> First and second assessment of the Needs Assessment Checklist (NAC): skin management subscale. Lower scores indicate lower levels of need (i.e., better outcomes).</p>	<ol style="list-style-type: none"> <li>1. Significant differences were observed between groups 1 and 3 in NAC scores at the first assessment (<math>p&lt;0.05</math>) and the second assessment (<math>p&lt;0.01</math>).</li> <li>2. Skin management scores were significantly lower at the second assessment of NAC compared to the first assessment in all groups (<math>p&lt;0.0001</math>; <math>p&lt;0.01</math>; <math>p&lt;0.01</math>).</li> <li>3. Skin management scores were significantly lower in group 1 compared to groups 2 and 3 at both the first and second time points (<math>p&lt;0.05</math> for both).</li> </ol>
Taylor et al. 2015 USA Observational N=1376	<p><b>Population:</b> Mean age: 38 yr; Gender: males=1115, females=261; Injury etiology: motor vehicle accident=688, fall/falling object=344, violence=151, sports=151, other=55; Level of Injury: tetraplegia C1-</p>	<ol style="list-style-type: none"> <li>1. Wheelchair fitting sessions were completed by 98% of patients with assessment and fitting sessions provided by a physiotherapist being most frequent (65%).</li> </ol>

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	<p>4=393, tetraplegia C5-8=270, paraplegia=499, other=214; Severity of Injury: AIS A-C=1140, AIS D=214.</p> <p><b>Intervention:</b> Patients enrolled in the SCIRehab Project completed questionnaires from time of injury through to discharge along with a follow-up telephone interview at 1 yr post-injury. Data collected for the study focused on responses regarding training interventions/activities, adapted equipment, and equipment evaluation.</p> <p><b>Outcome Measures:</b> Types of wheelchair training and skills learned, Types of fitting assessment, Adaptive equipment used, Wheelchair satisfaction.</p>	<ol style="list-style-type: none"> <li>2. Of the 5% who did not receive wheelchair skills training during inpatient rehabilitation, 44% reported no receipt of WC;</li> <li>3. Most people (80%) trained in manual wheelchair skills were prescribed a manual wheelchair only, 2% were prescribed a power WC only, and 10% were prescribed both types of chairs.</li> <li>4. A little over half (53%) of patients who received training only on power wheelchair and 33% reported prescription of both types of chairs.</li> <li>5. Almost half (48%) of patients who received training in both manual and power wheelchair skills reported prescription of both types of wheelchairs, 20% reported prescription of a power wheelchair and 28% reported prescription of only a manual wheelchair.</li> <li>6. 62% of the wheelchairs were received by the time of the patient's rehabilitation discharge and 98% were received by 6 months post discharge.</li> <li>7. Satisfaction with fit and function was reported among 87% of manual wheelchair users and 86% of power wheelchair users.</li> </ol>
<p>Ekiz et al. 2014 Turkey Observational N=27</p>	<p><b>Population:</b> Mean age: 32.9 yr; Gender: males=25, females=2; Injury Etiology: motor vehicle accident=10, falls from height=9, gunshot=2, spinal mass=2, disaster injury=1, infection=1, other=2; Level of Injury: cervical=6, thoracic=18, lumbar=3; Level of severity: AIS A=21, AIS B=4, AIS C=1, AIS D=1.</p> <p><b>Intervention:</b> Patient wheelchairs were examined by a physiatrist with parts such as armrest, headrest, wheels and seat belt evaluated along with ergonomic evaluations of seat length, seat depth, seat height, and back height.</p> <p><b>Outcome Measures:</b> Correct setting and appropriateness of wheelchair parts, Functional Independence Measure (FIM).</p>	<ol style="list-style-type: none"> <li>1. Seat height was found to be the most incorrect wheelchair measurement (18 wheelchairs (66.7%)).</li> <li>2. A total of 16 wheelchairs (59.3%) were found to have inappropriate cushions.</li> <li>3. Headrests were found to be the most correctly set part of the wheelchair with 26 wheelchairs (96.3%) having appropriate headrests.</li> <li>4. Seat length was found to be the most correct wheelchair measurement (21 wheelchairs (77.8%)).</li> <li>5. FIM Motor score was not correlated with the amount of time spent in the wheelchair per day.</li> </ol>
<p>Groah et al. 2014 USA Observational</p>	<p><b>Population:</b> Mean age: 44.3 yr; Gender: males=274 Females=86; Level of Injury:</p>	<ol style="list-style-type: none"> <li>1. A significant difference was found between type of funding and proportion of patients who</li> </ol>

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N=359	<p>C1-C4=48, C5-C8=121, T1-T7=85, T8-T12=80, L1-L5=20, unknown=5.</p> <p><b>Intervention:</b> Patients from six SCI Model Systems centres participated in a face-to-face interview and completed a set of questionnaires. Patients were asked about the type of funding they received (e.g., Medicare, Medicaid, the Department of Vocational Rehabilitation (DVR), workers compensation (WC), veteran's affairs (VA), private, pre-paid, or self-paid).</p> <p><b>Outcome Measures:</b> Type of wheelchair, type of primary funding source.</p>	<p>received lightweight customisable manual wheelchairs (<math>p=0.04</math>).</p> <ol style="list-style-type: none"> <li>2. There was a significant difference between private/prepaid and self-pay (<math>p&lt;0.05</math>) and between Medicaid/DVR and self-paid (<math>p&lt;0.05</math>) in the number of patients who received customizable lightweight manual wheelchairs.</li> <li>3. No significant differences were reported between the number of patients who received customisable power wheelchairs and type of funding.</li> <li>4. Significant differences were found between type of funding and level of injury (<math>p&lt;0.01</math>). Patients with tetraplegia were more frequently covered by Medicare (65% versus 34.5% whilst patients with paraplegia were more frequently covered by Medicaid/DVR (59.2% versus 40.8%), private/pre-paid (50.8% versus 49.2%), WC/VA (56.7% versus 43.3%), and self-paid (65.6% versus 34.4%).</li> </ol>
Ambrosio et al. 2007 USA Observational N=2,154	<p><b>Population:</b> <i>SCI Group</i> (<math>n=791</math>): Mean age: 52.8 yr; Gender: males=775, females=16. <i>Multiple Sclerosis Group (MS)</i>, (<math>n=1363</math>): Mean age: 55.3 yr; Gender: males=1213, females=150.</p> <p><b>Intervention:</b> Data on two Veterans Health Administration databases collected from 2000 to 2001 was analysed. The National Patient Care Database contained demographic information whilst the National Prosthetic Patient Database contained data regarding orthotic, prosthetic, and sensory devices distributed to patients.</p> <p><b>Outcome Measures:</b> Types of wheeled mobility devices.</p>	<ol style="list-style-type: none"> <li>1. Customised power wheelchairs were the most commonly prescribed power wheelchairs for SCI veterans with 36.3% of prescriptions.</li> <li>2. Ultra-lightweight manual wheelchairs were the most commonly prescribed manual wheelchairs for SCI veterans with 42.4% of prescriptions.</li> <li>3. Chi-square analyses revealed a significant difference between the SCI group and the MS group (<math>p&lt;0.001</math>) in terms of the devices provided with the MS group being prescribed a greater number of scooters (39% versus 12.8% of the SCI group), but fewer power chairs (33.7% versus 43.7% of the SCI group) and manual wheelchairs (44.7 versus 49.8 of SCI group).</li> </ol>
Di Marco et al. 2003 Australia Observational N=128	<p><b>Population:</b> NR.</p> <p><b>Intervention:</b> Occupational therapy staff aimed to develop a standard of practice to guide wheelchair prescription and patient education. Education was provided on a one-to-one basis and focused on the needs</p>	<ol style="list-style-type: none"> <li>1. A total of 86% patients chose to participate at the 3 mo follow-up and 79% participated at the 12 mo follow-up in the program.</li> <li>2. Staff noted that after teaching patients about wheelchair maintenance, the patients asked questions regarding advanced</li> </ol>

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	<p>of the patient. Follow-ups were completed at 3 mo and 12 mo.</p> <p><b>Outcome Measures:</b> Patient participation, effectiveness of new standards and practice guidelines.</p>	<p>wheelchair adjustments such as changing the camber and balance of the wheelchair.</p> <p>3. Staff believed that follow-up times of 3 mo and 12mo allowed for ample time for the patients to test their wheelchairs and identify potential issues.</p>